CLAIMS

1. A method comprising:

hydrothermally producing barium titanate-based particles;

maintaining the barium titanate-based particles in a wet environment; and

forming a coating on surfaces of the barium titanate-based particles, the coating comprising an oxide, hydrous oxide, hydroxide, or organic acid salt of a metal.

2. The method of claim 1, wherein the barium titanate-based particles are maintained in an aqueous slurry at least until after forming the coating on surfaces of the barium titanate-based particles.

3. The method of claim 1, wherein hydrothermally producing barium titanate-based particles comprises mixing barium hydroxide solution with a hydrous titanium oxide slurry.

4. The method of claim 1, wherein hydrothermally producing barium titanate-based particles further comprises heating the mixture of barium hydroxide solution with a hydrous titanium oxide slurry to a temperature in the range of 100 °C to 200 °C.

5. The method of claim 1, further comprising washing the barium titanate-based particles with a wash fluid prior to forming the coating on surfaces of the barium titanate-based particles.

6. The method of claim 5, further comprising removing at least some of the wash fluid from the particles prior to forming the coating on surfaces of the barium titanate-based particles.

7. The method of claim 1, further comprising de-agglomerating the coated barium titanate-based particles by high shear mixing.

8. The method of claim 7, comprising de-agglomerating the coated barium titanate-based particles by high shear mixing so that at least 90 percent of the coated particles have a particle size of less than 0.9 micrometer.

9. The method of claim 1, wherein the coating comprises an oxide, hydrous oxide, hydroxide or organic acid salt of at least one metal selected from the group consisting of lithium, magnesium, calcium, strontium, scandium, zirconium, hafnium, vanadium, niobium, tantalum, manganese, cobalt, nickel, zinc, boron, silicon, antimony, tin, yttrium, lanthanum, lead, bismuth or a Lanthanide element.